

0007



Norman H. Bangarter

Governor

Dee C. Hansen

Executive Director

Dianne R. Nielson, Ph.D.

Division Director

State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

355 West North Temple

3 Triad Center, Suite 350

Salt Lake City, Utah 84180-1203

801-538-5340

13 January 1993

TO: Pam Grubaugh-Littig, Permit Supervisor

FROM: Hugh Klein, Geologist/Hydrologist

RE: Co-Op PHC and Hydrogeologic Evaluation (Appendices 7-J & 7-N) Co-Op Mining Company, Bear Canyon Mine, ACT/015/025, Folder #3, Emery County, Utah

SUMMARY

On 17 September 1992, the Division received two documents from Co-Op: the Probable Hydrologic Consequences (PHC) of Mining At The Bear Canyon Mine and Revised Hydrogeologic Evaluation Of The Bear Canyon Mine Permit Area and Proposed Expansion Areas. Both documents were prepared by EarthFax Engineering and are respectively found in appendix 7-J and 7-N of the PAP. Subsequent to review, a meeting was held on 13 November 1992 in order to discuss the need for revisions and additional information. Co-Op/EarthFax responded to the deficiencies and concerns noted in the November meeting with a submittal on 13 December 1992. The submittal contained revised appendices 7-J and 7-N. The purpose of this memorandum is to outline the remaining deficiencies.

ANALYSIS**Appendix 7-N**

Section 5: It was discussed in the November meeting that section 5 was to be removed from this document and not included in the PAP. The PAP is not the appropriate place for a response to comments made by the North Emery Water Users Association, nor is it the place for the Division to review these. Co-Op may submit this information to the Division as a correspondence for inclusion in the file.

Section 6: The second conclusion discusses the fact that the three aquifers are, "not fully unsaturated." This is somewhat confusing, and is probably meant to read: are not fully saturated. Clarification is necessary here.

Section 6: The third conclusion states there is "no evidence to suggest that interception of water" by the mine has had an effect on two springs. The data collected for this study has been interpreted and found to suggest there is no effect on the springs. However, the term "no

evidence" is rather strong and an absolute, leaving no room for any other plausible explanations. Given the unknowns in the field of groundwater and particularly in the case of the hydrogeology at Bear Canyon, it would be more appropriate to change the text to reflect this.

Appendix 7-J

The cover page is dated December 11, 1991. This needs to be changed to December 11, 1992.

The sentence that starts on page 2-8 and ends on 2-9 is confusing. Clarification or editing here is necessary.

Page 2-9 states that plate 7-4 of the PAP shows all the water monitoring sites including those in the federal lease. At the time this review was conducted, plate 7-4 did not show the information for the FBC sites. This information must be provided.

In general, baseline water monitoring requirements for the federal leases have not been met. The sampling and testing done on the springs does not reflect seasonal variation. Monitoring must occur in consecutive quarters so as to show seasonal variation in quality and quantity. In addition, there is no information regarding the water bearing stratum above and below the coal seam. See R645-301-724 for the regulation concerning these issues.

RECOMMENDATION

In order for the appendices to be approved for the existing operation, the comments made above must be addressed.

At this time, the PHC does not meet the requirements for baseline water monitoring information for the federal lease. It should be noted that Co-Op has been informed previously of these deficiencies by this staff member, his supervisor and possibly others.